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EXAMINER

HOYE, MICHAEL W

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2614

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/617,036	Applicant(s) PAIK ET AL.	
	Examiner Michael W. Hoye	Art Unit 2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 February 2005 and 25 May 2005.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5, 6, 8-11, 13-15, 17-20, 22-29 and 31-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 6, 8-11, 13-15, 17-20, 22-29 and 31-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 July 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicants' arguments filed with respect to Claims 1-3, 5-6, 8-11, 13-15, 17-20, 22-29 and 31-39 have been fully considered but they are not persuasive.

Regarding the Examiner's response to arguments presented in the previous Office Action, Mailed on 11/17/04, the Applicants' argue in pages 20-21 of the Remarks section that:

"Traction et al. U.S. Patent 6,470,378 (hereinafter, "Tracton") and Cerna et al. U.S. Patent 5,444,707 (hereinafter, "Cerna") are non-analogous art. Traction is directed to using a computer device 402 with a network interface 420 that communicates with a remote device 442 via a communications link, e.g., network 444, or modem 445 connected to an interface port 418. Cerna, on the other hand, is directed to a multi-channel telephone switching system that switches packetized information from a source node to a desired destination node based on the digits dialed."

In response to Applicants' argument that Tracton and Cerna are non-analogous art, it has been held that a prior art reference must either be in the field of Applicants' endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, the Tracton reference clearly teaches that the system may support other architectures, including cellular-phone based browsers (col. 7, lines 25-27), and the reference teaches scaling source content according to client capabilities, network speed, and other abilities/restrictions (col. 5, lines 7-10 and 58-

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62). The content is video content (col. 4, lines 33-49), which may include an encoded news broadcast (col. 7, lines 47-48), broadcast at different bit-rates. The content is delivered to a cellular-phone based browser (col. 7, lines 25-27). Therefore, Tracton clearly teaches varying the rate and transmission bandwidth of video in a cellular phone system.

Moreover, the Cerna reference teaches a telecommunication system that uses flow control to dynamically adjust the bandwidth being used by adjusting quality of voice data (col. 7, lines 62-67) in order to prevent a condition where insufficient bandwidth is available resulting in lost data (col. 7, lines 45-49). Further, Cerna discloses data compression and transmission of fax and computer data as well (col. 5, lines 16-20). This packetized and compressed computer data may be packetized and compressed video data as is well known in the art. In summary, Tracton teaches varying an encoding rate of the video signals and a transmission bandwidth of the video signals according to client capabilities, network speed, and other capabilities/restrictions using a cellular phone system, and Cerna clearly teaches adjusting the bandwidth utilization of the network according to telephone call quantity information. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have combined the Tracton reference, which discloses a cellular phone based browser system that may receive a video/television broadcast that is broadcast at a varied encoding rate and transmission bandwidth according to various conditions as described above, with the Cerna reference, which teaches dynamically varying the bandwidth used by voice packets to adjust according to the changing traffic levels or telephone call quantity information, for the advantage of varying an encoding rate of the video signals and a transmission bandwidth of the video signals according to telephone call quantity information.

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Since both references are related to telephone networks and teach methods of transporting scaled data over digital networks, the art is analogous and combination based on obviousness is proper.

Regarding claims 1-3, 5-6, 8-9, 36 and 38, the Applicants' make similar arguments in pages 21-27 of the Remarks section as previously described above, in addition to, the Applicants' argue on page 24 that:

“Traction does not teach (1) a converting unit in a television receiver for converting video and audio signals provided from moving picture information from a TV broadcast station into a format compatible with a signal and transmission standard of a mobile radio communication system, or (2) a converting unit that comprises a coding unit which codes the video and audio signals to be compatible with a digital television broadcasting system and formats the coded video and audio signals to be compatible with the mobile radio communication system.”

In response to Applicants' arguments the Examiner respectfully disagrees with the Applicants because the Traction reference clearly discloses that the original source content 250 may be a MPEG encoded news broadcast or “television broadcast” that is sent to a server or “television [signal] receiver” which converts the signals into a format compatible with a signal and transmission standard of a mobile radio communication system as met by re-coding the MPEG-2 coding of the broadcast as a MPEG-1, MPEG-4, or other format/standard as needed for transmission to a cellular-phone or client based system (see col. 4, lines 33-49; col. 5, lines 58-62; col. 7, line 26 – col. 8, line 5).

The Applicant's also argue on page 25 that neither Cerna nor Margulis teach or suggest the recited, “converting unit in a television receiver for converting video and audio signals

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provided from moving picture information from a TV broadcast station into a format compatible with a signal and transmission standard of a mobile radio communication system, wherein the converting unit comprises a coding unit which codes the video and audio signals to be compatible with a digital television broadcasting system and formats the coded video and audio signals to be compatible with the mobile radio communication system.”

In response to Applicants’ arguments the Examiner respectfully disagrees with the Applicants because of the response given above for Tracton. Furthermore, the Cerna and Margulis references were not primarily cited in response to the claim limitations argued above. Cerna was used to provide additional teaching regarding adjusting the bandwidth utilization of the network according to telephone call quantity information, as described above, and Margulis was used to provide teaching of broadcasting TV data combined with EPG data to a portable display device. It is well known in the art of television broadcasting to provide EPG data along with the television data or content, and therefore, Margulis is not non-analogous art to Tracton, which discloses the use of television broadcasts in a wireless environment which may include the use of cellular telephones, or Cerna, which is related to dynamically varying the bandwidth used by voice packets according to changing traffic levels.

Regarding claims 11, 13-14 and 37, the Applicants’ make similar arguments on pages 28-30 as related to the Tracton, Cerna and Margulis reference combination as previously described above.

In response the Examiner respectfully disagrees with the Applicants for the reasons described above.

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In addition to, the Applicants argue on pages 28-29 that, Tracton, Cerna, Margulis or Legall does not teach or suggest a, "TV broadcast digital video and audio signal reception unit and decoder which decodes TV broadcast digital video and audio signals received [from] the TV broadcast digital video and audio signal reception unit," as recited in the claimed invention."

In response the Examiner respectfully disagrees with the Applicants because it is inherent that a device or system that receives TV broadcast digital video and audio signals comprises a decoder. It is well known to those of ordinary skill in the art of digital TV reception that a device or system which receives digital TV broadcast signals must use a decoder in order to process the digital signals for output of the audio and video signals, and/or display of the video signals.

The Applicants further argue that, "Legall contains no disclosure of transmitting television programs and is non-analogous to all three of the references it is used to modify in this rejection."

In response the Examiner respectfully disagrees with the Applicants because the Legall reference was not used to provide teaching regarding the transmitting of television programs, but to provide teaching of an EPG system (See Figure 2) where a user is able to search the EPG and other sources of information (col. 2, lines 60-66) by issuing a search request to a search engine, which interacts with external information resources such as the Internet or broadcasts (col. 3, lines 11-16). Further the system is operable to "offload" the handling of a search to the content provider so the receiving user's system does not have to perform the search (col. 5, lines 44-46). These features are well known to those of ordinary skill in the art of EPGs as shown by Legall, and therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Tracton

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in view of Cerna and further in view of Margulis with the EPG searching of Legall in order to allow a user to quickly locate information of interest.

Regarding claims 15, 17-20, 22-25 and 29, the Applicants argue on pages 30-32, and more specifically on the top of page 31 and again on page 32, as related to the amended independent claims 15, 19, 23 and 29, that, "Margulis and Cerna do not teach or suggest the recited (1) EPG (Electronic Program Guide) data converting unit for converting the EPG data for selecting a digital broadcast channel, in general, or (2) into a format agreeable to the mobile radio communication system, and (3) additional information converting unit for converting additional information of the digital broadcast signals, in general, or (4) into a format agreeable to the mobile raid communication system, as in the claimed invention."

In response the Examiner respectfully disagrees with the Applicants because the Margulis reference clearly discloses a broadcasting service system (See Figure 1) using a mobile communication terminal (158) comprising a digital video and audio input unit (122, 128, 134) which receives digital A/V signals broadcast from a provider of the pertinent information, a transcoding unit for converting the digital video and audio signals into a format and transmission rate agreeable to a mobile communication network (col. 7, lines 36-64) and a transmitting unit (156) for outputting and transmitting the transcoded-converted digital broadcast signals. It is inherent that at least one transmission channel he allotted for transmission of data, be it a physical channel (e.g. range of RF bandwidth) or a virtual channel on a digital transmission medium (e.g. TCP/IP port). More specifically, Margulis further discloses that the broadcasting service system includes EPG and additional data

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converting units that convert EPG data and additional information for selecting the digital broadcast channel into a format agreeable to the mobile network as met by the subsystem processor 518 (col. 4, lines 44-55 and col. 7, lines 36-64).

Similar arguments, as described above for amended independent claims 15, 19, 23 and 29, are reiterated by the Applicants for claims 19, 23 and 29 on pages 31-32, and the Examiner respectfully disagrees for the reasons given above.

Regarding amended independent claim 26, the Applicants argue on pages 32-35, and more specifically on page 33 that, "Margulis, Cerna and Legall do not teach or suggest at least the recited features of converting video and audio data of the selected channel into a format compatible with a standard of the mobile radio communication system, and transmitting the converted data through a certain transmission channel of the mobile radio communication system."

In response the Examiner respectfully disagrees with the Applicants because Margulis discloses a broadcasting service method (See Figure 1) using a mobile communication terminal (158) comprising a digital video and audio input unit (122, 128, 134) which receives digital A/V signals broadcast from a provider of the pertinent information, a transcoding unit for converting the digital video and audio signals into a format and transmission rate agreeable to a mobile communication network (col. 7, lines 36-64) and a transmitting unit (156) for outputting and transmitting the transcoded-converted digital broadcast signals. It is inherent that at least one transmission channel be allotted for

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transmission of data, be it a physical channel (e.g. range of RF bandwidth) or a virtual channel on a digital transmission medium (e.g. TCP/IP port).

The Applicants also argue that the reasons to modify or combine Margulis, in view of Cerna, in further view of Legall, are improper.

In response the Examiner repeats the relevant remarks already made above regarding the use of the Margulis, Cerna and Legall references.

Regarding claims 27-28, the Applicants argue on pages 35-36 that, "These claims depend from claim 26, which is patentable over the Margulis-Cerna-Legall reference combination for the reasons stated above." Moreover, the Applicants argue that, "Peters is not applied to remedy the deficiencies of Margulis and Cerna."

In response the Examiner repeats the relevant remarks already made above as related to claim 26.

Regarding claims 31-35 and 39, and more specifically amended independent claim 32, the Applicants argue on pages 35-36 that, "Margulis, Cerna and Tracton do not teach or suggest at least the recited selecting unit for selecting a TV broadcast signal reception mode and a mobile communication telephone call mode."

In response the Examiner respectfully disagrees with the Applicants because the Tracton reference discloses a mobile A/V reception device as previously described above that may be incorporated into a cellular phone (col. 7, lines 26-28). In addition, in a cellular phone enabled with mobile video reception, a selection means for selecting a broadcast

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signal mode or a mobile communication telephone call mode is inherent. Tracton provides the evidence or teaching that ordinary workers in the art would recognize the benefits of using a cellular phone platform in a mobile communication subscriber terminal with video reception.

The Applicants also argue on page 37 that the reasons to modify or combine Margulis, in view of Cerna, in further view of Tracton, are improper, and that it would not be obvious to modify the Improper Margulis-Cerna reference combination to use an MPEG 4 format.

In response the Examiner repeats the relevant remarks already made above regarding the use of the Margulis, Cerna and Tracton references. In addition to, the Tracton reference clearly teaches the use of MPEG 4 as described in col. 4, lines 33-49 and col. 7, lines 35-53.

Regarding claim 10, the Applicants argue on pages 37-38 that, "The aforementioned Tracton-Cerna-Margulis reference combination is improper for reasons discussed above, and does not render obvious claim 1, from which claim 10 depends." Moreover, the Applicants argue that, "Peters is not applied to remedy the deficiencies in the aforementioned reference combination."

In response the Examiner repeats the relevant remarks already made above as related to 1.

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2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 5-6, 8-9, 36 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tracton et al (USPN 6,470,378), in view of Cerna et al. (USPN 5,444,707), in further view of Margulis (USPN 6,263,503).

Regarding Claim 1, Tracton discloses a broadcasting service system (See Figure 4) using a mobile communication terminal (col. 7, lines 26-28) comprising a converting unit (cols. 7-8, lines 62-5) for converting video and audio signals (col. 4, lines 33-49), which may include an encoded news broadcast (col. 7, lines 47-48), broadcast at different bit rates, and provided from a moving picture information into a format compatible with a signal and transmission standard of a mobile radio communication system (col. 5, lines 58-62). It is inherent or well known that in a mobile radio communication system, which is wireless network (i.e. a cellular telephone network), a radio frequency (RF) spectrum may be used for data transmission. Tracton discloses a system wherein the converting (col. 5, lines 58-62) unit includes a coding unit which codes the digital video and audio data signals to be compatible with a digital television broadcasting system as stated above and formats the coded digital signals to be compatible with the mobile radio communication system (col. 6, lines 3-7). As previously stated above, the Traction reference clearly discloses that the original source content 250 may be a MPEG encoded news broadcast or "television broadcast" that is sent to a server or "television [signal] receiver" which converts the signals into a format compatible with a signal

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and transmission standard of a mobile radio communication system as met by re-coding the MPEG-2 coding of the broadcast as a MPEG-1, MPEG-4, or other format/standard as needed for transmission to a cellular-phone or client based system (see col. 4, lines 33-49; col. 5, lines 58-62; col. 7, line 26 – col. 8, line 5). Further disclosed is a transmitting unit (See Figure 9, 420), which transmits the converted video and audio signals to a subscriber terminal (442) through a certain transmission channel of the mobile communication network (444). Tracton also discloses supporting cellular-phone based devices (col. 7, lines 25-27). This reads on the claimed mobile communication subscriber terminal. Tracton discloses a server capable of scaling source content according to client capabilities, network speed, and other abilities/restrictions (col. 5, lines 7-10 and 58-62). This reads on the claimed controlling unit for varying an encoding rate (scaling source content) of the video signals. Varying the encoding rate directly corresponds to varying the transmission bandwidth as is well understood in the art. Further, as is well known in the art, a finite bandwidth transmission channel such as a mobile telephone network has a limited capacity, and subsequently a limited number of users may use the network at a given time.

What is not disclosed, however, is varying an encoding rate and transmission bandwidth in accordance with telephone call quantity information. Cerna discloses a multi-channel telephone system for transmitting voice and data packets (See Abstract). Cerna further discloses the use of flow control to dynamically vary the bandwidth of packets based on traffic levels (See Abstract and cols. 7-8, lines 45-2). The traffic levels read on the claimed call quantity information. Cerna is evidence that ordinary workers in the art would recognize the benefits of using telephone call quantity information to vary transmission bandwidth in a packet switching

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telephone network. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Tracton with the telephone call quantity information of Cerna in order to maximize the number of connections the network can support to minimize cost.

What Tracton in view of Cerna do not disclose, however, is a television receiver for use in converting information from a TV broadcast station and EPG data is formatted and multiplexed together and transmitted with the converted video and audio signals as additional information on the same data stream. Margulis discloses a wireless television system (See Figure 1) that accepts a variety of inputs including analog audio/video (122 and 128) including a cable TV signal that is received by a cable decoder (col. 4, lines 22-29). The input is then processed into a format that is compatible with the wireless client (col. 7, lines 36-44). The analog data is further digitized during this process (col. 7, lines 54-56). This reads on the claimed television receiver for converting video and audio signals provided from a TV broadcast station. EPG data is embedded in the television broadcast (col. 4, lines 44-55). This reads on the claimed formatting and multiplexing/transmission of EPG data with the converted video and audio signals and additional information on the same data stream. Margulis is evidence that ordinary workers in the art would appreciate the benefit of broadcasting TV data combined with EPG data to a portable display device. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Tracton in view of Cerna with the television source and EPG data of Margulis in order to allow a user easy access to a wide variety of programming when a regular television is not accessible.

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Regarding Claim 2, Tracton in view of Cerna and further in view of Margulis disclose a system as stated above in Claim 1. Tracton further discloses a system wherein the video and audio signals are compatible with both a first signal standard for a television broadcasting and a second signal standard (col. 4, lines 33-49), the first and second standard being compatible with another signal standard capable of converting between different systems (col. 7, lines 51-65).

Regarding Claim 3, Tracton in view of Cerna and further in view of Margulis disclose a system as stated above in Claim 2. Tracton further discloses a system wherein the first signal standard agrees with MPEG2 and the second standard agrees with MPEG4 (col. 4, lines 33-49).

Regarding Claim 5, Tracton in view of Cerna and further in view of Margulis disclose a system as stated above in Claim 1 including a coding unit that formats and codes a signal having a video and audio signal. Margulis discloses a wireless television system (See Figure 1) that accepts a variety of inputs including analog audio/video (122 and 128). The input is then processed into a format that is compatible with the wireless client (col. 7, lines 36-44). The analog data is further digitized during this process (col. 7, lines 54-56).

Regarding Claim 6, Tracton in view of Cerna and further in view of Margulis disclose a system as stated above in Claim 1. Tracton further discloses that the transmitting unit includes an outputting unit that outputs the formatted A/V signals on the transmission channel by transmitting the video and audio signals through the communication network (444). Margulis discloses a wireless television system as stated above wherein additional broadcasting information is put on the transmission channel with the A/V data (col. 4, lines

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44-55) including program guide information. Margulis is evidence that ordinary workers in the art would recognize the benefits of supporting various types of supplemental data transmissions in a wireless television system. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the system of Tracton in view of Cerna with the additional data of Margulis in order to provide additional information, such as an electronic program guide, to the user.

Regarding Claim 8, Tracton in view of Cerna and further in view of Margulis disclose a system as stated above in Claim 1. Tracton further discloses a system wherein the transmitting and converting units transmit data through a connected transmission channel (444) between the mobile communication subscriber terminal (442) and a base station (402).

Regarding Claim 9, Tracton in view of Cerna and further in view of Margulis disclose a system as stated above in Claim 1. Tracton further discloses a system wherein the converting and transmitting units transmit the video and audio signals through the communication network (444). It is inherent that at least one transmission channel be allotted for transmission of data, be it a physical channel (e.g. range of RF bandwidth) or a virtual channel on a digital transmission medium (e.g. TCP/IP port).

Regarding Claim 36, Tracton in view of Cerna and further in view of Margulis disclose a system as stated above in Claim 1. Tracton further discloses that the mobile communication terminal may be a cellular phone (col. 7, Line 27). Traction also discloses that the video signals may be, for instances, a news broadcast (col. 7, lines 46-48). A news broadcast, as is well known

in the art, could be a television broadcast. Margulis further discloses that the video signals are television broadcast signals as stated above in Claim 1.

Regarding Claim 38, Tracton in view of Cerna and further in view *of* Margulis disclose a system as stated above in Claim 1. Cerna further discloses a system wherein the controlling unit varies the encoding rate *of* the video signals in accordance with the telephone quantity information so that the video signals do not take all the available bandwidth as stated above in Claim 1. The encoding happens at a server, which reads on the claimed base station.

4. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tracton et al., in view of Cerna et al., in further view of Margulis, and still further in view of Peters et al. (USPN 6,246,430)

Regarding Claim 10, Tracton in view of Cerna and further in view of Margulis disclose a system as stated above in Claim 1. What is not disclosed however is the inclusion of an identifying unit that identifies an individual mobile communication subscriber from among all subscribers of the video and audio signal and a payment-demanding unit that demands a payment corresponding to a reception of the A/V signals for the identified individuals. Peters discloses a video telephone system (See Figure 2) with a video *server* (col. 2, lines 32-34). The users of the video telephone must insert a chip-card into the video telephone, thereby identifying themselves to the device (col. 4, lines 1-12). A subsequent charge is issued for the purchase (col. 4, Line 14-16). Peters is evidence that ordinary workers in the art would appreciate the ability to identify an individual subscriber and charge for services in a video telephone system. Therefore, it would have been obvious to one having ordinary

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skill in the art at the time the invention was made to modify the system of Tracton in view of Cerna and further in view of Margulis with the identification and charging of Peters in order to implement pay-per-view type services on a wireless video transmission system.

5. Claims 11, 13-14 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tracton et al., in view of Cerna et al., in further view of Margulis and still further in view of Legall et al. (USPN 6,005,565).

Regarding Claim 11, Tracton discloses a mobile communication terminal (col. 7, lines 26-28) comprising a digital video and audio reception unit (See Figure 4, 112), a decoder (106), which decodes the TV broadcast digital data received from the TV broadcast digital video and audio signal reception unit, and an outputting unit which outputs the decoded signal (col. 9, lines 6-20) as stated above in Claim 1. Further, Tracton in view of Cerna disclose that the mobile communication terminal receives and decodes the video signal at a rate which varies in accordance with a voice telephone call quantity information and a variable transmission rate of the mobile radio communication system as stated above in Claim 1.

What Tracton in view of Cerna do not disclose, however, is a television receiver for use in converting information from a TV broadcast station and EPG data is multiplexed with the digital video and the mobile terminal includes a receiving-decoding unit which receives and decodes the EPG signal from the video signal. Margulis discloses a wireless television system (See Figure 1) that accepts a variety of inputs including analog audio/video (122 and 128) including a cable TV signal that is received by a cable decoder (col. 4, lines

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22-29). The input is then processed into a format that is compatible with the wireless client (col. 7, lines 36-44). The analog data is further digitized during this process (col. 7, lines 54-56). This reads on the claimed television receiver for converting video and audio signals provided from a TV broadcast station. EPG data is embedded in the television broadcast (col. 4, lines 44-55). It is inherent that the client be able to receive and decode the EPG signal in order to display it to the user, Margulis is evidence that ordinary workers in the art would appreciate the benefit of broadcasting TV data combined with EPG data to a portable display device. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Tracton in view of Cerna with the television source and EPG data of Margulis in order to allow a user easy access to a wide variety of programming when a regular television is not accessible.

What Tracton in view of Cerna and further in view of Margulis do not disclose, however, is a transmitting unit which transmits a subscriber search answer of the decoded EPG signal to a broadcast service system. Legall discloses an EPG system (See Figure 2) where a user is able to search the EPG and other sources of information (col. 2, lines 60-66) by issuing a search request to a search engine, which interacts with external information resources such as the Internet or broadcasts (col. 3, lines 11-16). Further the system is operable to "offload" the handling of a search to the content provider so the receiving user's system does not have to perform the search (col. 5, lines 44-46). This reads on the claimed transmitting unit which transmits a subscriber search answer of the decoded EPG signal to a broadcast service system. Legall is evidence that ordinary workers in the art would appreciate the ability to search an EPG. Therefore, it would have been obvious to one

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having ordinary skill in the art at the time the invention was made to modify the system of Tracton in view of Cerna and further in view of Margulis with the EPG searching of Legall in order to allow a user to quickly locate information of interest.

Regarding Claim 13, Tracton in view of Cerna, further in view of Margulis and still further in view of Legall disclose a system as stated above in Claim 11. Tracton further discloses a system wherein the mobile communication terminal is a cellular phone (col. 7, Line 27).

Regarding Claim 14, Tracton in view of Cerna, further in view of Margulis and still further in view of Legall disclose a system as stated above in Claim 11. Tracton also discloses the client has a browser (col. 7, lines 26-28) and a web server (col. 5, lines 16-19). Further, Tracton in view of Cerna and further in view of Margulis disclose a system wherein EPG data is transmitted to the client as stated above. The combination of Tracton in view of Cerna and further in view of Margulis would therefore disclose the utilization of the web server and browser to access the EPG data and additional information.

Regarding Claim 37, Tracton in view of Cerna, further in view of Margulis and still further in view of Legall disclose a system as stated above in Claim 11. Tracton further discloses that the mobile communication terminal may be a cellular phone (col. 7, Line 27). Tracton also discloses that the video signals may be, for instances, a news broadcast (col. 7, lines 46-48). A news broadcast, as is well known in the art, could be a television broadcast. Margulis further discloses that the video signals are television broadcast signals as stated above in Claim 11.

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6. Claims 15, 17-20, 22-25 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Margulis in view of Cerna et al.

Regarding Claim 15, Margulis discloses a broadcasting service system (See Figure 1) using a mobile communication terminal (158) comprising a digital video and audio input unit (122, 128, 134) which receives digital A/V signals broadcast from a provider of the pertinent information, a transcoding unit for converting the digital video and audio signals into a format and transmission rate agreeable to a radio mobile communication system (col. 7, lines 36-64) and a transmitting unit (156) for outputting and transmitting the transcoded-converted digital broadcast signals. It is inherent that at least one transmission channel he allotted for transmission of data, be it a physical channel (e.g. range of RF bandwidth) or a virtual channel on a digital transmission medium (e.g. TCP/IP port). Margulis further discloses that the broadcasting service system includes EPG and additional data converting units that convert EPG data and additional information for selecting the digital broadcast channel into a format agreeable to the mobile radio communication system (col. 4, lines 44-55 and col. 7, lines 36-64). What is not disclosed, however, is varying an encoding rate and transmission bandwidth in accordance with telephone call quantity information. Cerna discloses a multi-channel telephone system for transmitting voice and data packets (See Abstract). Cerna further discloses the use of flow control to dynamically vary the bandwidth of packets based on traffic levels (See Abstract and cols. 7-8, lines 45-2). The traffic levels read on the claimed call quantity information. Cerna is evidence that ordinary workers in the art would recognize the benefits of using telephone call quantity information to vary transmission bandwidth in a packet switching telephone network. Therefore, it

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would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Margulis with the telephone call quantity information of Cerna in order to maximize the number of connections a single trunk line can support and minimize cost.

Regarding Claim 17, Margulis in view of Cerna disclose a system as stated above in Claim 15. Margulis further discloses that the broadcasting service system transmits the EPG data and additional information as the agreeable format to the mobile radio communication system (col. 4, lines 51-55 and col. 7, lines 36-64).

Regarding Claim 18, Margulis in view of Cerna discloses a system as stated above in Claim 15. The EPG data converting unit inherently includes a decoder which decodes the inputted EPG stream of the digital broadcast signals. Further, it is inherent that there be a restoring unit for retrieving the decoded EPG data in order to broadcast it to the users. In any digital system where data conversion occurs, there is inherently a memory (See Figure 6) that is used to store data to be processed. This reads on the claimed database that stores the information corresponding to the restored EPG data. Further Margolis discloses an EPG outputting means that outputs the EPG information from the data base corresponding to a subscriber request and a converting means that converts the additional information of the digital broadcast into a format agreeable to the mobile radio communication system (col. 4, lines 51-55).

Regarding Claim 19, Margulis discloses a broadcasting service system (See Figure 1) using mobile communication terminal (158) comprising a DSP unit for receiving a digital broadcast signal and providing a broadcast program to a mobile radio

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communication system (col. 5, lines 15-19). Further disclosed is a media storage unit (See Figure 6, 646) for storing the broadcast program processed by the digital signal-processing unit (518). Further disclosed is a data processing and converting unit for converting the EPG data and additional information processed by the DSP unit into a signal format compatible with the mobile radio system as stated above in Claims 15 and 17-18. Margulis discloses that the data processing and converting unit includes an EPG and additional information data decoding unit as stated above in Claim 18. Further, Margulis discloses a signal converter as stated above in Claim 18. It is inherent that the signal conversion means have a protocol converting means for converting the converted EPG data into a protocol compatible with the mobile radio communication system in order for the client to be able to receive the EPG and additional information data. Further disclosed is a transcoder (cols. 7-8, lines 36-10 and col. 8, lines 44-55) and transmission means (156) for receiving the A/V signals of the broadcast and additional information processed by the DSP means and converting it into a signal format compatible with the mobile radio communication system and outputting it. What is not disclosed, however, is varying an encoding rate and transmission bandwidth in accordance with telephone call quantity information. Cerna discloses a multi-channel telephone system for transmitting voice and data packets (See Abstract). Cerna further discloses the use of flow control to dynamically vary the bandwidth of packets based on traffic levels (See Abstract and cols. 7-8, lines 45-2). The traffic levels read on the claimed call quantity information. Cerna is evidence that ordinary workers in the art would recognize the benefits of using telephone call quantity information to vary transmission bandwidth in a packet switching telephone network. Therefore, it would have

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been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Margulis with the telephone call quantity information of Cerna in order to maximize the number of connections a single trunk line can support and minimize cost.

Regarding Claim 20, Margulis in view of Cerna disclose a system as stated above in Claim 19. Margulis further discloses that the DSP unit includes a tuner (120, 132) for selecting the digital broadcast signal received from the transmission medium such as a television broadcast (128), satellite broadcast (134) and cable broadcast (122). It is inherent that these tuners have a demodulating means (612) for restoring the selected digital broadcast signal. Further disclosed is a demultiplexer (col. 11, lines 42-46) for fetching the EPG and additional information from the demodulated signal, and a decoder for decoding the A/V signals (See Figure 5, 538).

Regarding Claim 22, Margulis in view of Cerna disclose a system as stated above in Claim 19. Margulis further discloses that the transcoder and transmission mean include a transcoder (538) for transcoding the digital broadcast A/V signal into a format agreed with the radio mobile communication system. Further Margulis discloses a system that reduces the bit rate of the A/V data (col. 7, lines 65-67). This reads on the claimed transmission rate control means for controlling the transmission rate agreeable to the mobile radio communication system. Further it is inherent that there be a converting mean for converting the output of the data processing and converting means into a data protocol agreeable to the network in order for the clients to be able to receive the data properly. It is further inherent in such a digital system that there be a synchronization processing means for synchronizing

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information during transcoding and protocol converting such that time-based data be delivered in the appropriate order to the viewers. Further disclosed is a transmitting means (156) for transmitting the data in real time over the system. It is inherent that at least one transmission channel be allotted for transmission of data, be it a physical channel (e.g. range of RF bandwidth) or a virtual channel on a digital transmission medium (e.g. TCP/IP port).

Regarding Claim 23, Margulis discloses a broadcast server method using a mobile communication terminal as stated above. Further disclosed is converting a broadcast signal including digital video and audio data into a format agreed with a signal and transmission standard of the mobile radio communication system and transmitting the data to a subscriber through a certain transmission channel of the mobile radio communication system as stated above. Margulis further discloses formatting and multiplexing EPG data together with the transmitted video and audio data as stated above in Claim 1. What is not disclosed, however, is varying an encoding rate and transmission bandwidth in accordance with telephone call quantity information. Cerna discloses a multi-channel telephone system for transmitting voice and data packets (See Abstract). Cerna further discloses the use of flow control to dynamically vary the bandwidth of packets based on traffic levels (See Abstract and cols. 7-8, lines 45-2). The traffic levels read on the claimed call quantity information. Cerna is evidence that ordinary workers in the art would recognize the benefits of using telephone call quantity information to vary transmission bandwidth in a packet switching telephone network. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Margulis with the telephone call

quantity, information of Cerna in order to maximize the number of connections a single trunk line can support and minimize cost.

Regarding Claim 24, Margulis in view of Cerna disclose a method as stated above in Claim 23. Margulis further discloses that the converting process includes the steps of converting A/V data of a digital broadcast into a data format agreeable to the standard and transmission rate of the mobile radio communications system as stated above and converting the EPG data and additional information as stated above.

Regarding Claim 25, Margulis in view of Cerna disclose a method as stated above in Claim 23. Margulis further discloses that the transmission process includes the steps of synchronization of the converted digital A/V data, EPG data and additional information as stated above. Further disclosed is converting the data into a protocol agreeable to the mobile radio communication system and allotting a certain transmission channel and putting the digital data corresponding to the protocol of the system on the channel as stated above.

Regarding Claim 29, Margulis discloses a broadcasting service system using a mobile communication terminal as stated above comprising an analog broadcasting reception means which receives an analog television broadcasting system as stated above. Further disclosed is a digital converting means which converts the analog broadcasting signal received by the analog broadcasting reception means into a digital signal as stated above. Margulis further discloses that the system includes an EPG signal and additional information abstracting means for abstracting the EPG signal and additional information and an encoding-converting means for converting the EPG signal and additional information into a signal agreeing with the mobile radio communication system as stated above. An

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encoding-converting mean is disclosed which converts the digital broadcasting signal converted by the digital converting means into a signal agreed with the mobile radio communication system and an allotting-transmitting means is disclosed which allots the converted digital broadcast signal by the encoding-converting means on the certain transmission channel of the system and transmits it as is stated above. Margulis in view of Cerna disclose a system wherein an encoding rate of the video signals and a transmission rate of the mobile radio communication system are varied in accordance with a voice telephone call quantity information as stated above in Claim 15.

7. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Margulis in view of Cerna et al. and further in view of Legall et al.

Regarding Claim 26, Margulis discloses a broadcasting service method using a mobile communication terminal as stated above comprising transmitting a TV broadcast signal having multiplexed EPG data to a subscriber through a mobile radio communication system as stated above. It is inherent in such systems that the EPG data may be transparently pushed to the subscriber's terminal or downloaded upon request. Further, it is well known in the art that a channel may be selected by searching EPG data. Margulis also discloses converting the A/V data of a selected channel into the data agreed with the standard of the mobile radio communications system and transmitting the data through the channel of the system as stated above. It is inherent that at least one transmission channel be allotted for transmission of data, be it a physical channel (e.g. range of RF bandwidth) or a virtual channel on a digital transmission medium (e.g. TCP/IP port). Margulis in view of

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Cerna disclose a system wherein an encoding rate of the video signals and a transmission rate of the mobile radio communication system are varied in accordance with a voice telephone call quantity information as stated above in Claim 15. Further disclosed is a receiving-decoding unit which receives and decodes the EPG signal from the video as stated above.

What is not disclosed, however, is a transmitting unit which transmits a subscriber search answer of the decoded EPG signal to a broadcast service system. Legall discloses an EPG system (See Figure 2) where a user is able to search the EPG and other sources of information (col. 2, lines 60-66) by issuing a search request to a search engine, which interacts with external information resources such as the Internet or broadcasts (col. 3, lines 11-16). Further the system is operable to "offload" the handling of a search to the content provider so the receiving user's system does not have to perform the search (col. 5, lines 44-46). This reads on the claimed transmitting unit which transmits a subscriber search answer of the decoded EPG signal to a broadcast service system. Legall is evidence that ordinary workers in the art would appreciate the ability to search an EPG. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Margulis in view of Cerna with the EPG searching of Legall in order to allow a user to quickly locate information of interest.

8. Claims 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Margulis in view of Cerna and further in view of Legall et al. and still further in view of Peters et al.

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Regarding Claims 27 and 28, Margulis in view of Cerna and further in view of Legall disclose a method as stated above in Claim 26. What is not disclosed, however, is a system wherein a right for watching the digital broadcast is granted to a subscriber and the EPG information is provided to the subscriber after confirming and certifying the right. Peters discloses a video telephone system (See Figure 2) with a video server (col. 2, lines 32-34). The users of the video telephone must insert a chip-card into the video telephone, thereby identifying themselves to the device (col. 4, lines 1-12). A subsequent charge is issued for the purchase (col. 4, Line 14-16). This reads on the claimed right for watching the digital broadcast is granted to the subscriber. If the user does not authenticate, the video telephone unit remains locked (col. 4, Line 4). This reads on the claimed providing information to the subscriber after confirming and certifying the right. Peters is evidence that ordinary workers in the art would appreciate the ability to restrict access to content based on subscriber identification and payment in a wireless television system. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Margulis in view of Cerna and further in view of Legall with the identification, payment and privileges of Peters in order to prevent unauthorized access to certain content in a video telephone system.

9. Claims 31-35 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Margulis in view of Cerna et al. and further in view of Tracton et al.

Regarding Claim 31, Margulis in view of Cerna disclose a system as stated above in Claim 29. What is not disclosed, however, is the use of the MPEG 4 format. Tracton

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discloses a system wherein data sent to the mobile communication network is in the MPEG 4 format (col. 4, lines 45-49). Tracton is evidence that ordinary workers in the art would recognize the benefits of using the low bit-rate MPEG 4 format in a limited bandwidth network. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Margulis in view of Cerna with the MPEG 4 format of Tracton in order to further conserve bandwidth.

Regarding Claim 32, Margulis discloses a mobile communication subscriber terminal as stated above comprising a TV broadcasting reception means (See Figure 7, 724) that receives a broadcasting signal that includes motion picture information as stated above. Further disclosed is a decoding means (732), which restores the received broadcast signal by the broadcasting reception means. An outputting means is disclosed (212) which outputs the restored broadcast signal by the decoding means for being watched on the mobile radio communication system. A selecting means (See Figure 3, 312) is disclosed for selecting the broadcasting signal reception mode. Margulis further discloses EPG data being formatted and multiplexed together with the transmitted video and audio signals and additional information as stated above in Claim 1. Further, Margulis in view of Cerna disclose a system wherein the bit-rate of the transmission is varied in accordance with a telephone call quantity information and a transmission rate of a mobile radio communication system as stated above. It is inherent that the mobile terminal receive and decode the signal at the rate which it is broadcast.

What is not disclosed, however, is a communication processing means that receives a call signal provided to the mobile radio communication system and restore-outputs the call

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signal, and coding-outputs a subscriber call signal through the mobile radio communication system. Tracton discloses a mobile A/V reception device as stated above that may be incorporated into a cellular phone (col. 7, lines 26-28). It is inherent in such phones that there be a communication processing means as claimed above. Further, in a cellular phone enabled with mobile video reception, a selection means for selecting broadcast signal mode or mobile communication telephone call mode is inherent. Tracton is evidence that ordinary workers in the art would recognize the benefits of using a cellular phone platform in a mobile communication subscriber terminal with video reception. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Margulis in view of Cerna with the communication processing means and selection means of Tracton in order to provide phone service as part of the mobile radio communication subscriber terminal.

Regarding Claim 33, Margulis in view of Cerna and further in view of Tracton disclose a system as stated above in Claim 32. Margulis further discloses a system wherein the broadcast reception unit includes an antenna (720) and a tuner (724), the decoder includes a demodulation unit (732) for demodulating video and audio signals of an analog television broadcasting signal selected from the tuner and output unit includes a speaker (770) for outputting the demodulated audio signal and the mobile communication terminal (212) for displaying the demodulated video signal when the broadcast signal is an analog television broadcast signal.

Regarding Claim 34, Margulis in view of Cerna and further in view of Tracton disclose a system as stated above in Claim 32. Margulis further discloses a terminal

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wherein the broadcasting reception unit includes a bit stream reception unit (720) for receiving a bit stream from a terminal antenna and a digital broadcast signal, the decoder (732) includes a demodulation and restoring unit (724) for demodulating video and audio signals of the digital broadcast signal and restoring the demodulated video and audio signals, and the outputting unit (770) includes a speaker for outputting the restored audio signal on a monitor (212) for displaying the restored video signal on the mobile communication terminal when the broadcast signal is the digital broadcast signal.

Regarding Claim 35, Margulis in view of Cerna and further in view of Tracton disclose a system as stated above in Claim 32. Tracton further discloses that the mobile communication subscriber terminal is a cellular phone as stated above.

Regarding Claim 39, Margulis in view of Cerna and further in view of Tracton disclose a system as stated above in Claim 19. Cerna further discloses that the controlling unit varies the encoding rate of the video signals in accordance with the telephone quantity information at a base station so that the video signals do not take all available bandwidth as stated above in Claim 38.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Herrod et al (US 2001/0055978 A1) – Discloses a portable data terminal and cradle.

Huang et al (USPN 6,437,836 B1) – Discloses an extended functionality remote control system and method.

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Kikinis et al (US 2001/0008000 A1) – Discloses a micro personal digital assistant with a compress bios system.

Thompson et al (USPN 6,484,011 B1) – Discloses a wireless information presentation device.

Thompson et al (USPN 6,504,580 B1) – Discloses a wireless information presentation device with advertising display.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael W. Hoyer whose telephone number is **571-272-7346**. The examiner can normally be reached on Monday to Friday from 8:30 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller, can be reached at **571-272-7353**.

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Michael W. Hoyer
August 18, 2005


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